

**Draft Summary of the Engineering and Operations Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
March 1, 2002**

The Department of Water Resources (DWR) hosted the Engineering and Operations Work Group on March 1, 2002 in Oroville.

A summary of the discussions, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present an informational summary for interested parties who could not attend the meeting.

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Flip Chart Notes
Attachment 4	Apr – Sept 1990 Water Balance, Butte and Sutter Basins Atlas
Attachment 5	Oroville Facilities Relicensing Regulations, Agencies, Definitions and Acronyms
Attachment 6	2002 Meeting Schedule

Introduction

Attendees were welcomed to the Engineering and Operations Work Group meeting. The meeting objectives and action items were discussed. The meeting agenda and list of meeting attendees and their affiliations are appended to this summary as Attachments 1 and 2, respectively. Flip chart notes are included as Attachment 3.

Modeling Scheme

Curtis Creel of DWR discussed comments from the February 2002 Plenary Group meeting regarding Engineering and Operations Study Plans. He explained the Plenary Group identified heartburn issues related to establishment of a model review process. As a result, the Plenary Group formed a Task Force to develop a model review protocol. The Model Review Task Force met in February and developed a draft model review protocol.

Ken Kules suggested that anyone interested in CALSIM II participate in the modeling task force for the Water Plan Update; Ken, Curtis Creel and Patrick Porgans recently attended a Water Plan Update modeling task force meeting. Ken explained that the Water Plan considers a survey of water development throughout the State and future water demands and uses the CALSIM II model. Water Plan Update participants have concerns similar to some E&O Task Force participants regarding CALSIM II; we may consider developing a review process utilizing discussions held by Water Plan Update participants.

John Coburn with the State Water Contractors asked what the difference is between CALSIM II and CALSIM I and if a need to get into the details of the two models would be necessary. Curtis explained that in the evolution of this model, CALSIM I was an implementation of the early modeling effort by DWR, while CALSIM II is more of an integrated effort between DWR and the Bureau of Reclamation. Bill Smith added that CALSIM I is identical to DWRSIM. Curtis explained that they would like to use the updated version of CALSIM II in the relicensing effort. John asked if the depletions studies would be the same. Bill explained that in CALSIM II the Sacramento Basin is more detailed.

Curtis explained that the Plenary Group is satisfied with the progress of the Engineering and Operations Work Group. An exception was a heartburn issue expressed by Ken Kules. Ken is concerned that the supporting model analysis for geomorphic studies might not meet the needs of the Environmental Work Group. Ken explained that he understood Study Plan E1.6 to focus on sediment transport. In T2 however, information is needed on bank and channel scour. Curtis explained that SP-E1.6 would support SP-G1 and SP-G2 and magnitude and frequency data

needed for SP-T2 could come from the comprehensive studies. He added that DWR assumed their velocity data would be sufficient.

Work Group participants discussed needs of the Environmental Work Group and potential overlap, which may mean that SP-E1.6 is not needed since information would be available from other models. Bill explained that he wrote the Study Plans assuming geomorphic modeling would be done in the Engineering and Operations Work Group. Many groups may require flow stage and flow mapping information and it should all come from the same source. With multiple models, we could end up with three different outputs so it is imperative that we determine specific information requirements. Ken agreed with Curtis and Bill and explained that we need to find the right approach to evaluate geomorphic issues. Engineering and Operations participants agreed that coordination with the Environmental Work Group is needed to define output needs and identify individuals to participate in a joint E&O/Environmental Task Force. The list of potential E&O Work Group participants identified to work on the joint E&O/Environmental Task Force is included in Attachment 3. Curtis and the Facilitator will coordinate with Steve Ford to obtain a list of interested Environmental Work Group participants and identify a time that most people can attend. If necessary, a conference call line will be reserved. The Task Force will focus specifically on the issue of flow stage velocity modeling and meeting the needs of Study Plans T2, G1 and G2.

Curtis explained that the Plenary Model Review Task Force has scheduled their next meeting for Monday, March 4, 2002 at 1:00 p.m. A summary of the models DWR may choose to use for Oroville Facilities relicensing was distributed at both the Task Force and Plenary Group meeting; Curtis noted that DWR is currently considering a product called Vista from Acres International. Bill explained that Vista is a modeling tool currently being used for the Bonneville system in Washington.

Curtis began a discussion on specific activities associated with proposed model run requests. The general approach identifies SWRI staff performing the simulations and DWR staff reviewing the data. Curtis reminded the group that it would take a series of iterations to get the models functioning correctly. In an effort to minimize the number of iterative model runs, Curtis suggested close coordination with relicensing Resource Area Managers. Curtis explained that a model run prioritization process will be developed by the Model Run Request Task Force. Curtis will put together a first draft Model Run Request protocol and Lori Brown will distribute it to the Engineering and Operations Work Group by March 8, 2002. Comments will be due back by March 13, 2002 when a conference call will be held at 9:30 a.m. to discuss the comments.

Howard Lee suggested establishing a regularly scheduled link or contact point between modelers and representatives of Work Groups to stay on schedule. All agreed as long as it did not impact modelers' ability to get work done; Curtis pointed out that the RAMS meet every two weeks now so this could become an ongoing agenda topic.

PM&E Impacts to Water Supply and Generation – Potential New Study Plan

Curtis explained that Craig Jones with the State Water Contractors suggested that we might need an additional Study Plan that looks at impacts on generation and water supply. While Craig was not in attendance, Curtis reported that Craig and Nan Nalder have drafted an additional Study Plan for Engineering and Operations Work Group consideration. Craig would like to analyze the impact of proposed operational changes to the Oroville Facilities that could result from the relicensing effort. The Facilitator reminded the group that the analysis of alternatives or protection, mitigation, and enhancement measures would come after the first year studies assess baseline conditions. There is currently no operational changes planned for the Oroville Facilities but there are things that could be constructed that have to be analyzed as alternatives to evaluate the impacts. She added that changes would be analyzed not only for Engineering and Operations impacts but also for other resource areas. Curtis suggested this is not a critical path study and could be deferred to a later date. He will distribute copies of the draft when available.

Review, Revise and Approve Study Plans E3, E4 & E8

Rashid Ahmad explained that during the December 5, 2001 meeting the Engineering and Operations Work Group approved SP-E3 and SP-E4 for recommendation to the Plenary Group, where they were both approved. However, during the January 25, 2002 Engineering and Operations Work Group meeting, Rashid submitted a few minor changes, recommended by Howard Lee to SP-E3 to be more specific as well as to emphasize FERC's role. Rashid asked the group for consensus that these changes were insignificant and did not merit another Plenary Group review. With one grammatical error, the group agreed that SP-E3 and SP-E4 could be considered approved without a second round with the Plenary Group.

Curtis discussed the status of SP-E8 and explained that the SWCs would like DWR to characterize and summarize historic data on pump back operations. The request for this information is meant to clarify frequency of pump back operations and the decision process that guides pump back operations. Agreements such as the power exchange agreement between DWR and Southern California Edison factor into certain operational decisions. One participant suggested that DWR include an explanation of how in 2001, DWR was in stand-by mode as directed by the ISO. Curtis agreed that this was a good point because one of the things we have to do is help protect the state from future energy shortages. DWR generates power during on peak periods and consumes energy during off peak periods to minimize energy use associated with its pumping activities. Unlike investor owned utilities like PG&E, DWR is driven by water supply not by power economics.

Action Items – January 25, 2002 Engineering and Operations Work Group Meeting

A summary of the January 25, 2002 Engineering and Operations Work Group is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Carry over Action Item:

Action Item #EO35: Provide summary of information related to agricultural return flows to the Feather River.

Status: Curtis distributed a diagram showing the water supply, measured outflow and computed outflow for Butte and Sutter Basins. Curtis indicated that someone is working on focusing this better on our area of interest and should have something by the next meeting. The diagram is included as Attachment 4.

Action Item #EO37: Check with Environmental Work Group to make sure we capture effects related to agricultural temperature needs and bring back to the Engineering and Operations Work Group for review of modeling adequacy.

Status: Curtis discussed this with the Environmental Work Group and Steve Ford indicated the Environmental Work Group's needs were being met related to agricultural temperature data.

Action Item #EO38: Consider an outside review of the models after they have been developed.

Status: This was discussed earlier in the meeting. The Plenary Group initiated a Task Force to develop model review protocols.

Action Item #EO39: Add a GIS layer recording temperature and flow data collection points

Status: Has been added to needs for GIS group – Data will be input when available.

Action Item #EO40: Include in E3 an analysis that addresses power impacts from potential changes resulting from other studies.

Status: This was discussed earlier in the meeting as the focus of an additional Study Plan to be drafted by Craig Jones and Nan Nalder.

Next Steps

The Facilitator briefly reviewed Study Plan status for the Engineering and Operations Work Group. She explained that the Plenary approved 38 Study Plans without heartburn. After a

clarifying telephone call, the Cultural Study Plans were also approved bringing the total to 42. There are some Study Plans, particularly developed by the Environmental Work Group that have been presented to the Plenary Group. Those Study Plans are currently being discussed in focused Environmental Work Group meetings to resolve issues of federal, state and local agencies and will be discussed in Fisheries Task Force meetings for consideration by the Plenary Group in April. There are also meetings being held to discuss ESA and cumulative impact issues.

Curtis discussed a previous conversation with Ed Craddock of Butte County. He asked Ed about some comments made at the Plenary Group meeting regarding watershed modeling and fuel load. Curtis suggested that those Study Plans were not looking at water supply and we have not seen a relicensing requirement for doing upstream watershed modeling. Ed said that he saw watershed modeling as a forecasting tool. Curtis asked the group if they felt this had been addressed appropriately for group understanding without additional modeling. The group agreed it had been appropriately addressed.

A participant asked how far up the watershed Butte County would want to examine. Curtis explained that Michael Pierce is asking to go all the way to the ridgeline. Ed explained that there is a program in place to develop a watershed model, and Butte County is trying to obtain local cost sharing participation.

The Facilitator distributed the Oroville Facilities Relicensing Regulations, Agencies, Definitions and Acronyms to Engineering and Operations Work Group participants and explained that it is a work in progress and would be posted on the relicensing web site. This document is included as Attachment 5.

Meeting Schedule

The facilitator distributed a revised 2002 Meeting Schedule, included as Attachment 6, to the Engineering and Operations Work Group. A tentative conference call meeting was scheduled for April 3, 2002 to discuss the results of the March 28, 2002 Plenary Group meeting. The call in number is 1-877-711-0471 and the passcode is 883305#.

Next Meeting

The Engineering and Operations Work Group agreed to meet as a Task Force via teleconference and videoconference on:

Date: March 22, 2002
Time: 10:00am – 3:00pm
Location: Oroville Field Division

Agreements Made

The group agreed to approve Study Plans SP-E3, SP-E4 and SP-E8 without sending them back through the Plenary Group.

Action Items

The following list of action items identified by the Engineering and Operations Work Group includes a description of the action, the participant responsible for the action and item status.

Action Item #EO41: Post CALSIM II PowerPoint presentation on Website
Responsible: DWR
Due Date: March 22, 2002

Action Item #EO42: Form a joint Task Force with the Environmental Work Group.
Responsible: DWR/Facilitator
Due Date: As soon as possible

Action Item #EO43: Create an E&O model run request protocol.

Responsible: Curtis Creel
Due Date: March 8, 2002

Action Item #EO44: Consider having regular meetings with the RAMS to check in on modeling needs and status.

Responsible: DWR RAMs regularly meet every two weeks.
Due Date: N/A

Action Item #EO44: Check with B. Mendenhall on Butte County GIS coordination.
Responsible: Curtis Creel
Due Date: March 22, 2002

Action Item #EO44: Check with Butte County regarding their watershed issue.
Responsible: Curtis Creel
Due Date: March 22, 2002